REMARKS/ARGUMENTS

Claims 1-20 are pending. Claims 1-20 have been rejected. Claims 1, 2 and 15-17 have been amended. The amendment of Claim 1 is supported by original Claim 2. Claim 2 has been amended and is supported on page 5, lines 3-15 and page 9, lines 1-13. The amendments of Claims 15-17 merely change claim dependency and cancel redundant/ineffectual limitations arising from the amendment of Claim 1.

The §112 Rejection

Claims 1-8 and 10-17 have been rejected under 35 U.S.C. §112 second paragraph as being indefinite.

Claim 1 has been rejected for containing the term "thin" because "no comparison is made." Applicants point out that thin would be easily understood by one of ordinary skill in the art to relate to the honeycomb itself and from the citations of suitable honeycombs would immediately understand such term. (See first two full paragraphs on page 3). Nevertheless, Applicants have cancelled the offending "thin" with no change is scope intended. Applicants, therefore, request withdrawal of this rejection of Claim 1.

Claim 1 has also been rejected as because it "recites the limitation 'monolithic ceramic honeycomb' in 13." Claim 1 has been amended in line 13 of the claim to read "ceramic honeycomb", which has antecedent basis in the claim. Applicants, therefore, request withdrawal of the rejection.

Claim 15 has been rejected because "the term 'acicular' lacks antecedent basis in claim 1." Claim 15 has been amended to depend from Claim 14 rendering this rejection moot.

The §102(b)

Claims 1, 8, 12 and 13 have been rejected under the 35 U.S.C. §102(b) as being anticipated by Kobayashi (Sho58-150322 cited in the IDS filed 1/22/2007; translation).

Applicants disagree, because Kobayashi fails to describe each and every element of the claim such as "liquid containing the reactant substantially penetrates into the walls", but, nevertheless, Claim 1 has been amended to incorporate the limitations of Claim 2, which is novel as per the Office Action and as such amended Claim 1 is novel.

The §103(a) Rejection

Claims 1-8, 12 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Duncombe et al. (U.S. 4,430,348) in view of Kobayashi (Sho58-150322) as applied to Claims 1, 8, 12 and 13 above and further in view of Bliss et al., (U.S. 2005/159308). (See pages 7 and 8 of the Office Action).

Claims 1-8, 12 and 13, later in the Office Action (page 9) were rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi applied to Claims 1, 8, 12 and 13 above and further in view of Bliss et al., (U.S. 2005/159308). Applicants note no difference in the argument presented regarding Claim 2 between this rejection and the one presented previously on pages 7 and 8. It appears that Duncombe or Kobayashi is being used as a primary reference and Bliss is being used as secondary to support the contention that the limitations of pore size and porosity is taught by Bliss and that applying it to either Duncombe or Kobayashi would be obvious to one of ordinary skill in the art.

In support of this contention, the Office Action states:

> Bliss discloses a multicellular ceramic honeycomb that supports catalyst has an inlet and an outlet end and a multiplicity of mutually adjoining cells extending along the length of the body. Typically, the wall pore size ranges between about 0.1 to 100 micrometers, preferably between about 1 to 40 micrometers while the porosity typically

ranges between about 15-70%, preferably between about 25 to 50%.

The Office Action then supports the combination by stating, "[t]he ordinary artisan would have had reasonable expectation that said pore size and porosity would be successful in the method of the combined disclosures because they are recognized by the prior art as being typical sizes for ceramic honeycomb flow through reactors that supports a catalyst."

Bliss is concerned only with catalyst supports for cleaning *gaseous exhaust* such as catalytic converters and diesel particulate filters. (Abstract) The Examiner has recognized that such substrates are preferably less than 50%. Bliss specifically teaches that the substrates are to be rendered hydrophobic so that the catalyst does not penetrate into the walls of the honeycomb (paras. 15, 25, 43 and Claim 1).

Kobayashi teaches in the last full paragraph of page 3 of the translation that a first "crudeness layer," which is interpreted to mean a layer having substantial roughness is fixed to the walls of the honeycomb. This allows for the enzyme to become fixed on the crudeness layer. Apparently, this operation so chokes off the honeycomb channels that the honeycomb is punched with some sort of holes. The catalyst enzyme gel is then fixed and made solid on the wall of the honeycomb. (See 1st two full paragraphs of page 4). Likewise, Duncombe coats the wall of the ceramic monolith to fix the catalyst at the wall surface. (Example 2, col. 9, lines 45-46). Thus, in all instances, these references clearly teach the deposition of the catalyst on the outer surface of the walls of the ceramic honeycomb and take great pains to do so. This appears to be done to ensure catalyst contact with the liquid flowing through the channels.

In contrast the present invention, describes that the catalyst needs to be deposited within the wall of the honeycomb to see the surprising result of improved catalytic activity arising from the discovery that a liquid reactant can have a substantial static fraction penetrating the walls in a liquid reaction method. (See page 5, lines 3-17 and page 9, line 10). That is, each of the above cited art, teaches away from such a configuration, because they fail to describe or even recognize that a liquid can even substantially penetrate the wall in a liquid flow through reactor much less

think to coat ceramic grains within the wall with catalyst to take advantage of this as in the present invention (see amended Claim 2). For this reason, amended Claim 1 and its dependent Claims are non-obvious.

Considering the foregoing reasons and amendments, Claims 1-20 are definite, novel and non-obvious. Applicants, therefore, respectfully request withdrawal of all rejections and allowance of Claims 1-20.

Respectfully submitted,

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